
TECHNICAL HANDBOOK FOR
ENVIRONMENTAL HEALTH AND ENGINEERING
VOLUME III - HEALTH CARE FACILITIES DESIGN AND CONSTRUCTION
PART 24 - CONSTRUCTION GUIDELINES

**CHAPTER 24-2 APPLICABILITY OF CODES, CONSTRUCTION CODES
AND STANDARDS**

24-2.1	INTRODUCTION	(24-2)	1
24-2.2	APPLICABILITY OF CODES	(24-2)	1
24-2.3	REFERENCE CODES AND STANDARDS	(24-2)	2

24-2.1 INTRODUCTION

To define applicability and implementation of codes, standards, and/or guidelines for construction, renovations, and replacement of real and/or personal property at Indian Health Service (IHS) installations.

24-2.2 APPLICABILITY OF CODES

A. Background

Whenever the term code is heretofore used in this chapter it shall imply a code, standard, and/or guideline.

Codes are either regressive or non-regressive. A regressive code is one that when changes or modifications to the code occur; they may apply to new and existing structures and/or equipment. A regressive code is specifically arranged in a manner that details the requirements for compliance for new and existing facilities separately. The National Fire Protection Association Life Safety Code (NFPA 101) is an example of a regressive code. A non-regressive code is one that applies only to new construction. The Standard for Health Care Facilities as described in the NFPA 99 is an example of a non-regressive code.

All codes generally define in their introduction the target the code is intended to apply. Codes also state the extent of retroactivity when applicable. Generally, organizations that develop codes do not intend that the provisions in a revised edition of a code be applied to structures, and/or equipment at installations that were existing or approved for construction or installation prior to the effective date of a code. This rational reinforces the usually understood premise that any system installed in accordance with any good practice is acceptable during the expected life of that particular system. The statement is made to limit the resulting disruption and financial impact on existing installations to those necessary to provide the minimum acceptable level. They reflect situations and the state of the art at the time the code was issued.

The Facilities Managers at an installation may at times need to maintain various editions of the same code due to various compliance decisions made when real or personal property is

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renovated, replaced or added, or significantly altered in the opinion of the Authority Having Jurisdiction.

B. Design Criteria

IHS shall use the latest code published at the design stage when determining the requirements for new construction, and major renovations, and replacement of real and/or personal property. This requirement shall apply to new and existing installations.

The renovations to existing real or personal property must be significant enough to require implementation of the latest published code. Minor renovations, as judged by the Authority Having Jurisdiction, do not trigger the requirements for using the latest edition of a code. Although efforts should be made to satisfy the criteria for the latest code during renovations of existing structures or equipment, codes recognize that such modifications cannot always be achieved. The resulting financial impact when applying the latest code on all renovations, to existing real or personal property cannot be borne by the agency.

Engineering Services Dallas and/or Seattle as the Authority Having Jurisdiction (AHJ) in the IHS will determine the applicability of codes requirements in all instances. The ES shall be used as the source of guidance for determinations at the IHS Area office and installation level. The decisions of the AHJ shall be final.

24-2.3 REFERENCE CODES AND STANDARDS

The following are nationally recognized organizations and/or government agencies that publish codes, standards, regulations, and/or guidelines that IHS considers as the minimum requirements to implement with the new construction and renovation, and the operation and maintenance management programs of its real and personal property.

- A. National Fire Protection Association (NFPA)
- NFPA 101 - Life Safety Code
 - NFPA 99 - Health facilities
 - NFPA 70 - National Electrical Code
 - NFPA 70B - Electrical equipment maintenance
 - NFPA 70E - Electrical Safety for Employee Workplaces
 - NFPA 58 - Liquefied Petroleum Gases
 - NFPA 54 - National Fuel Gas code
 - NFPA 25 - Inspection/Testing/Maintenance of Water Based Systems
 - NFPA 13 - Installation of Sprinklers
 - NFPA 10 - Portable Fire Extinguishers
- B. American National Standards Institute (ANSI)

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- C. National Board Inspection Code for Boiler and Pressure Vessels
- D. American Institute of Architects (AIA) Guidelines for Design and Construction of Hospital and Health Care Facilities
- E. Code of Federal Regulations (CFR)
 - 41 CFR 101 - Property Management
 - 29 CFR 1910 - Plant Safety
 - 28 CFR 36 - Handicapped Accessibility Guidelines
- F. American Society of Mechanical Engineers
 - Safety Code for Elevators and Escalators
 - Inspectors Manual for Elevators and Escalators
 - Guide for Emergency Evacuation from Elevators
 - Standard for the Qualifications of Elevator Inspectors
- G. Joint Commission on Accreditation of HealthCare Organizations
 - Accreditation Manual for Hospitals
 - Accreditation Manual for Ambulatory Health Care
 - Environmental of Care standards
- H. National Institute for Occupational Safety and Health (NIOSH)
 - Guidelines for Protecting the Safety/Health of Healthcare Workers
 - Infection Control in the Hospital
 - Waste Anesthetic Gases and Vapors
- I. United States Department of Energy
 - Architect Engineer Guide to Energy Conservation in Buildings
- J. Centers for Disease Control and Prevention (CDC)
 - Indoor Air Quality
- K. National Sanitation Foundation
 - Class II Laminar Flow Biohazard Cabinetry
- L. American Hospital Association
 - Waste Management for Health Care Facilities
 - Developing an Emergency Preparedness Program
 - Medical Gas and Vacuum Systems
 - Fire Warning and Safety Systems
 - Safety Management for Health Care Facilities
 - Hazard Communication for Health Care Facilities
 - Electrical Systems for Health Care Facilities
 - Mechanical Systems for Health Care Facilities
- M. International Conference of Building Officials
 - Uniform Building Code
 - Uniform Mechanical Code
 - Uniform Plumbing Code
 - Uniform Electrical Code

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- N. American Society for Heating/Refrigeration/Air Conditioning (ASHRE)
 - Fundamentals
 - Equipment
 - Refrigeration
 - Applications
 - Energy
- O. Sheet Metal/Air Conditioning Contractors National Association (SMACNA)
 - Energy Conservation Guidelines
 - Energy Equipment Recovery and Systems
 - Fire/Smoke/Radiation Damper Installation Guide for HVAC Systems
 - HVAC Duct Leakage Test Manual
 - HVAC Systems Testing, Adjusting and Balancing
 - Indoor Air Quality Manual
 - Installation Standards for Residential HVAC Systems
 - Kitchen Equipment Fabrication Guidelines
 - Retrofit of Building Energy Systems and Processes
 - Seismic Restraint Manual
- P. United States Environmental Protection Agency (EPA)
 - Managing Asbestos in Place
 - Musts for Underground Storage Tanks
- Q. National Council on Radiation Protection and Measurements (NCRP)
 - NCRP Report No. 35, Dental X-Ray Protection

NCRP Report No. 49, Structural Shielding Design and Evaluation
for Medical Use of X Rays and Gamma Rays of Energies Up to
10 MeV

This chapter contains major construction codes, standards, and/or guidelines. However, problems arising from specific construction project conditions not covered herein shall be resolved through the exercise of sound construction practices and referenced to recognized standards compatible with those delineated in this chapter.